

## **REMARKS**

The Applicant is filing this Amendment and Response in response to an Official Action dated July 14, 2005. At the time of the Official Action, claims 1-36, 58 and 59 were pending, and claims 9-19, 27-36 and 58-59 were withdrawn from consideration. In this Response and Amendment, claims 6-7 and 24-25 are canceled. Claims 9-19, 27-36, 58 and 59 have been withdrawn. Accordingly, claims 1-5, 8-23, 26-36 and 58-59 remain currently pending. Claims 1 and 20 are amended.

In the Office Action, claims 58 and 59 were withdrawn by the Examiner. The Applicant does not concede the correctness of the withdrawal of these claims. However, at the present time, the Applicant accepts the withdrawal to further the prosecution of the remaining claims. The Applicant reserves the right to pursue the withdrawn claims in a subsequent continuation application.

Additionally, in the Office Action, claims 1-8, 20-21 and 23-26 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,020,235 to Chang (“the Chang reference”). Claims 3 and 22 were rejected under 35 U.S.C. § 103(a) as being obvious based on the Chang reference in view of U.S. Patent Publication No. 6,055,655 to Momohara (“the Momohara reference”). Each of these rejections is addressed in detail below.

### **The Rejection Under 35 U.S.C. § 102(e)**

With respect to the rejection of independent claims 1 and 20 under Section 102 based on the Chang reference, the Examiner stated:

Claims 1-2, 3-8, 20-21 and 23-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Chang (US 6020235).

Regarding claim 1, Chang discloses a plurality of capacitive memory elements disposed on a substrate so that an axis that runs longitudinally through one of the plurality of capacitive memory elements is not generally parallel with an edge of the substrate (Fig. 3 and Col. 2, lines: 50-65)...

Regarding claim 20, Chang discloses an integrated circuit device, comprising: a memory array that includes a plurality of memory cells disposed on the substrate, the memory array comprising a plurality of capacitive memory elements, each of the capacitive memory elements being associated with one of the plurality of memory cells, the plurality of capacitive memory elements being disposed on the substrate so that an axis that runs longitudinally through one of the plurality of capacitive memory elements is not generally parallel with an edge of the substrate (Fig. 3 and Col. 2, lines: 50-65).

Office Action, pp. 2-4.

The Applicant respectfully traverses the rejection. Anticipation under section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). In order to maintain a proper rejection under section 102, a single reference must teach each and every element or step of the rejected claim, else the reference falls under section 103. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984). Accordingly, the Applicant need only point to a single element not found in the cited reference to demonstrate that the cited reference fails to anticipate the claimed subject matter. The prior art reference also must show the *identical* invention “*in as complete detail as contained in the ... claim*” to support a *prima facie* case of anticipation. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989).

In the present case, the Chang reference does not anticipate the Applicant's claims under Section 102 because every element of the claimed invention is not identically shown in the Chang reference. Specifically, independent claim 1, as amended, recites a "capacitive memory element having a first electrode with an interior portion forming a pair of concentric sidewalls *extending perpendicularly from a substrate.*" (Emphasis added.) Similarly, independent claim 20, as amended, recites a "capacitive memory element having a first electrode with an interior portion forming a pair of concentric sidewalls *extending perpendicularly from the substrate.*" (Emphasis added.)

In contrast to the Applicant's claims, the Chang reference discloses a memory cell having a shell-shaped electrode 13 and 15 that extends *parallel* to a substrate. Specifically, the shell-shaped electrode 13 and 15 forms a sleeve around the core 14, and the core 14 extends along the surface of the substrate "from one memory cell to another memory cell." Chang, col. 2, ll. 24-26 and 52-55; Fig. 3. Therefore, the shell-shaped electrode 13 and 15, which surrounds the core 14, also extends along the surface of the substrate. That is, the Chang reference teaches a shell-shaped electrode 13 and 15 that extends *parallel* to a substrate.

Thus, the Chang reference does not disclose a system with a capacitive memory element having a first electrode with an interior portion forming a pair of concentric sidewalls *extending perpendicularly from a substrate.*

For at least these reasons, the Applicant respectfully submits that independent claims 1 and 20 (and the claims dependent thereon) are not anticipated by the Chang reference.

Accordingly, the Applicant respectfully requests the withdrawal of the rejection of claims 1 and 20 under Section 102 based on the Chang reference.

**The Rejection Under 35 U.S.C. § 103**

With respect to the rejection of claims 3 and 22 under 35 U.S.C. § 103 as being rendered obvious by the Chang reference in view of the Momohara reference, the Examiner stated:

Claims 3 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (US 6020235) in view of Momohara (US 6055655).

Regarding claims 3 and 22, Chang discloses the structure of claims 1 and 20 as mentioned above, however, Chang does not explicitly disclose wherein the substrate comprises a processor.

Momohara discloses a system-on-silicon i.e. processor and memory on the same substrate (Figs. 1a-b and Col. 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Chang's memory structure into Momohara's system on a chip for the purpose of reducing the size and cost as taught by Momohara (Col. 1).

Office Action, p. 6.

The Applicant respectfully traverses the rejection. The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but

also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988).

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

The rejection of claims 3 and 22 under Section 103 is defective for at least the reasons set forth above with respect to the rejection of independent claims 1 and 20 under Section 102. Moreover, neither the Chang reference nor the Momohara reference discloses a system with a capacitive memory element having a first electrode with an interior portion forming a pair of concentric sidewalls *extending perpendicularly from a substrate*. Therefore, the combination of the Chang reference and the Momohara reference cannot render the Applicant's claims obvious. Accordingly, the Applicant respectfully asserts that the rejections of claims 3 and 20 under Section 103 are erroneous and should be withdrawn.

**Conclusion**

In view of the remarks set forth above, the Applicant respectfully requests reconsideration of the Examiner's rejections and allowance of all pending claims 1-5, 8, 20-23 and 26. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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